

Amendments To The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend the claims as follows.

1. (Previously Presented) A test method for examining a shooting direction of a camera apparatus by comparing a position of a reference pattern and a position of a judgment pattern on a displayed photographed image so as to judge if said shooting direction is adjustable by a first adjuster, wherein said shooting direction is adjustable by a second adjuster, and a first adjustable range by said first adjuster is smaller than a second adjustable range by said second adjuster, comprising:

photographing with said camera apparatus a test chart placed at a predefined position ahead of said camera apparatus with a reference pattern drawn on the test chart, the photographing producing a photographed image;

setting a judgment pattern at a specific position on said photographed image, said judgment pattern represents said first adjustable range; and

displaying said photographed image including said reference pattern with said judgment pattern on a display device;

judging whether said reference pattern is within said judgment pattern; and

notifying of information concerning adjustment of said shooting direction by said second adjuster in the case where said reference pattern deviates from said judgment pattern.

2. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said judgment pattern having at least one judgment reference line extending in a horizontal direction and at least one judgment reference line extending in a vertical direction is set on said photographed image in said setting step.

3. (Original) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said photographed image is displayed on a navigation display provided in a navigation device in said displaying step.

4. (Previously Presented) A test method for examining whether a shooting direction of a camera apparatus attached to a body of a vehicle is within a finely adjustable range which is an adjustable range by an image transformation, wherein said shooting direction is adjustable by a mounting adjuster of said camera apparatus, and said finely adjustable range is smaller than a mounting adjustable range by said mounting adjuster, comprising:

obtaining a photographed image by photographing with said camera apparatus a test chart placed at a predefined position ahead of the vehicle with a reference pattern drawn on the test chart;

determining a position of said reference pattern on said photographed image;

judging on compliance or non-compliance of the shooting direction of said camera apparatus based on a relationship between the position of said reference pattern determined and a proper range defining a finely adjustable range which is an adjustable range by said image transformation for the shooting direction of said camera apparatus; and

notifying of information concerning adjustment of said shooting direction by said mounting adjuster in the case where said reference pattern deviates from said proper range.

5. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 4, wherein said determining step includes:

evaluating a correlation of each of specific regions in said photographed image with a previously prepared specific brightness characteristics pattern; and
specifying a position of one of said regions having the greatest correlation as the position of said reference pattern;

wherein said brightness characteristics pattern has the same brightness characteristics as said reference pattern shown on said photographed image.

6. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 5,

wherein said determining step includes evaluating the correlation with said brightness characteristics pattern by searching through a specific search range within said photographed image,

wherein a setting position of said search range is determined based on the position of said reference pattern shown on said photographed image under conditions where said camera apparatus is properly mounted, and an area of said search range is set in consideration of a deviation of the shooting direction of said camera apparatus.

7. (Original) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said reference pattern is at least one of a crisscross pattern and a rectangular pattern.

8. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 4, comprising:

notifying of information concerning current mounting conditions of said camera apparatus in the case said reference pattern deviates from said proper range.

9. (Previously Presented) A test method for examining the shooting direction of the camera apparatus attached to a body of a vehicle, comprising:

obtaining a photographed image by photographing with said camera apparatus a test chart placed at a predefined position ahead of the vehicle with a reference pattern drawn on the test chart;

determining a position of said reference pattern on said photographed image;

judging on compliance or non-compliance of the shooting direction of said camera apparatus based on a relationship between the position of said reference pattern determined and a proper range defining a range appropriate for the shooting direction of said camera apparatus;

notifying an examiner of information concerning current mounting conditions of said camera apparatus or information concerning adjustment of the mounting of said camera

apparatus according to the amount of deviation of said reference pattern when said reference pattern deviates from said proper range,

wherein camera apparatus is attached to the vehicle body via a replaceable mounting member and the shooting direction of said camera apparatus is determined by the shape of said mounting member; and

said notifying step includes: selecting a mounting member having a shape for minimizing the amount of deviation of said reference pattern from a plurality of previously prepared mounting members having different shapes; and notifying the examiner of said selected mounting member.

10. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein

said camera apparatus is a stereo camera apparatus having a pair of cameras, and
said photographed image is an image photographed by one of said cameras.

11.-31. (Cancelled)

32. (Previously Presented) A test method for examining a shooting direction of a camera apparatus to judge whether or not the camera apparatus can be positioned within a finely adjustable range which is adjusted by an image transformation with respect to the deviation of a camera position, wherein said shooting direction is adjustable by a mounting adjuster of said camera apparatus, and said finely adjustable range is smaller than a mounting adjustable range by said mounting adjuster, comprising:

obtaining a photographed image by photographing with said camera apparatus a test chart placed at a predefined position ahead of said camera apparatus with a reference pattern drawn on the test chart;

setting a judgment pattern at a specific position on said photographed image, said judgment pattern represents said finely adjustable range;

displaying said photographed image with said judgment pattern on a display device; and
examining compliance or non-compliance of the shooting direction of said camera

apparatus by comparing a position of said reference pattern and a position of said judgment pattern on said displayed photographed image; and

notifying of information concerning adjustment of said shooting direction by said mounting adjuster in the case where said reference pattern deviates from said proper range.

33. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 32,

wherein said judgment pattern having at least one judgment reference line extending in a horizontal direction and at least one judgment reference line extending in a vertical direction is set on said photographed image in said setting step.

34. (Previously Presented) The test method for examining the shooting direction of the onboard camera apparatus according to claim 32, wherein

said camera apparatus is attached to a vehicle body via a replaceable mounting member and adjusting the shooting direction of said camera apparatus by said mounting adjuster is determined by the shape of said mounting member; and

said information concerning adjustment of said shooting direction comprises information concerning said mounting member having a shape for minimizing the amount of deviation of said reference pattern from a plurality of previously prepared mounting members having different shapes.

35. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein

said camera apparatus is attached to a vehicle body via a replaceable mounting member and adjusting the shooting direction of said camera apparatus by said second adjuster is determined by the shape of said mounting member; and

said information concerning adjustment of said shooting direction comprises information concerning said mounting member having a shape for minimizing the amount of deviation of said reference pattern from a plurality of previously prepared mounting members having different shapes.

36. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 4, wherein

said camera apparatus is attached to the vehicle body via a replaceable mounting member and adjusting the shooting direction of said camera apparatus by said mounting adjuster is determined by the shape of said mounting member; and

said information concerning adjustment of said shooting direction comprises information concerning said mounting member having a shape for minimizing the amount of deviation of said reference pattern from a plurality of previously prepared mounting members having different shapes.

37. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said first adjuster is an image transformation.

38. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said second adjuster is a mechanical mounting of the camera apparatus.

39. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said information concerning adjustment of said shooting direction comprises an information for minimizing the amount of deviation of said reference pattern from said judgment pattern.

40. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said information concerning adjustment of said shooting direction comprises an information required for shifting said reference pattern within said judgment pattern.

41. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said information concerning adjustment of said shooting

direction comprises a warning to notice that said shooting direction is out of said first adjustable range.

42. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said information concerning adjustment of said shooting direction comprises a warning to notice that an adjustment by said second adjuster is required.

43. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein said displaying said photographed image comprises presenting said photographed image to an examiner so that said examiner is able to visually verify a relationship between said reference pattern and said judgment pattern.

44. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 43, wherein said examiner judges whether said reference pattern is within said judgment pattern.

45. (Previously Presented) The test method for examining the shooting direction of the camera apparatus according to claim 1, wherein a test unit automatically judges whether said reference pattern is within said judgment pattern.

46. (New) A test method for examining a shooting direction of a camera apparatus comprising:
photographing with said camera apparatus a test chart placed at a predefined position ahead of said camera apparatus with a reference pattern drawing on the test chart, and producing a photographed image of said reference pattern;

setting a judgment pattern at a specific position on said photographed image, said judgment pattern representing a first adjustable range;

comparing a position of the reference pattern and a position of the judgment pattern on the photographed image so as to judge if said shooting direction is adjustable by a first adjuster, wherein said shooting direction is adjustable to a second adjustable range by a second adjuster, and the first adjustable range is smaller than a second adjustable range,

displaying said photographed image including said reference pattern with said judgment pattern on a display device;

judging whether said reference pattern is within said judgment pattern; and

notifying of information concerning adjustment of said shooting direction by said second adjuster in the case where said reference pattern deviates from said judgment pattern.